Claims

What is claimed is:

1.   A system that facilitates controlling a data communication associated with a remote method call, the system comprising:

a pluggable channel, adapted to interact with one or more sinks, the pluggable channel further adapted to interact with a communication infrastructure; and

a selector, operable to choose one or more sinks to employ to perform processing associated with the data communication, the selector further operable to associate the one or more sinks with the pluggable channel.

2.   The system of claim 1, where the data communication associated with the remote method call occurs between a client and a server in a distributed object system.

3.   The system of claim 2, where the one or more sinks comprise at least one of a channel sink, a format sink, a transport independent sink, a user sink, a security sink and a transport sink.

4.   The system of claim 3, where at least one of the one or more sinks is a programmatic object that can be programmed by a user of the at least one sink.

5.   The system of claim 4, where at least one of the one or more sinks has a client component.

6.   The system of claim 5, where at least one of the one or more sinks has a server component.

7. The system of claim 4 where the one or more sinks implement one or more object-oriented interfaces that facilitate the one or more sinks interacting with the communication infrastructure and/or other sinks.

8. The system of claim 3, where one or more sinks may be associated with a pluggable channel on a per proxy basis.

9. The system of claim 8, where the selector selects sinks to associate with the pluggable channel by examining registered pluggable channels.

10. A system that facilitates adapting a communication associated with a remote method call in a distributed object system, the system comprising:

a formatter adapted to format data associated with a method call made on a remote object, where the method call is intercepted by the distributed object system; and

a selector adapted to facilitate choosing a formatter to process data associated with the method call, the selector further adapted to associate the formatter with a proxy object that images the remote object.

11. The system of claim 10, where the formatter may be plugged into a pluggable channel.

12. The system of claim 11, where the formatter is a programmatic object that can be programmed by a user of the formatter.

13. The system of claim 12, where the formatter implements an object-oriented interface that facilitates interacting with the distributed object system.

14. The system of claim 13, where the formatter has a client component.

15. The system of claim 14, where the formatter has a server component.

16.   A system that facilitates adapting a communication associated with a remote method call in a distributed object system, the system comprising:

a security processor adapted to perform security processing on data associated with a method call made on a remote object, where the method call is intercepted by the distributed object system; and

a selector adapted to facilitate choosing a security processor to process data associated with the method call, the selector further adapted to associate the security processor with a proxy object that images the remote object.

17.   The system of claim 16, where the security processor may be plugged into a pluggable channel.

18.   The system of claim 17, where the security processor is a programmatic object that can be programmed by a user of the security processor.

19.   The system of claim 17, where the security processor implements an object-oriented interface that facilitates interacting with the distributed object system.

20.   The system of claim 19, where the security processor has a client component.

21.   The system of claim 20, where the security processor has a server component.

22.   A system that facilitates adapting a communication associated with a remote method call in a distributed object system, the system comprising:

a transporter adapted to transport data associated with a method call made on a remote object, where the method call is intercepted by the distributed object system; and

a selector adapted to facilitate choosing a transporter to transport data associated with the method call, the selector further adapted to associate the transporter with a proxy object that images the remote object.

23.   The system of claim 22, where the transporter may be plugged into a pluggable channel.

24.   The system of claim 23, where the transporter is a programmatic object that can be programmed by a user of the transporter.

25.   The system of claim 24, where the transporter implements an object-oriented interface that facilitates interacting with the distributed object system.

26.   The system of claim 25, where the transporter has a client component.

27.   The system of claim 26, where the transporter has a server component.

28.   A system that facilitates adapting a communication associated with a remote method call in a distributed object environment, the system comprising:

at least one of:

at least one customizable formatter adapted to format data associated with a method call made on a remote object, where the method call is intercepted by the distributed object system and where the customizable formatter may be plugged into a pluggable channel;

at least one customizable security processor adapted to perform security processing on data associated with the method call made on the remote object, where the customizable security processor may be plugged into the pluggable channel;

at least one customizable transporter adapted to transport data associated with the method call made on the remote object between a caller and a callee, where the customizable transporter may be plugged into the pluggable channel; and

at least one user sink; and

a selector adapted to facilitate choosing at least one of a customizable formatter, a customizable security processor and a customizable transporter to process data associated with the method call.

29.   The system of claim 28 where at least one of the formatter, the security processor and the transporter is a programmatic object that can be programmed by a user of the system.

30.   The system of claim 29, where at least one of the formatter, the security processor and the transporter implement one or more an object-oriented interfaces that facilitate interacting with the distributed object environment.

31.   The system of claim 30, where at least one of the formatter, the security processor and the transporter has a client component.

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32.   The system of claim 31, where at least one of the formatter, the security processor and the transporter has a server component.

33.   A computer readable medium containing computer executable components of a system that facilitates customizing a component to component communication associated with a remote method call in a distributed object environment, the system comprising:

a pluggable channel component, adapted to interact with one or more sink components, the pluggable channel component further adapted to interact with the distributed object environment; and

a selector component, operable to choose one or more sink components to associate with the computer communication, the selector component further operable to associate the one or more sink components with the pluggable channel component.

34.   A method to facilitate customizing a channel, the method comprising:
registering one or more pluggable channels;
intercepting a method call made on a remoted object;
determining whether one of the one or more registered channels desires to customize data communications associated with the method call on the remoted object;
creating a channel sink associated with the registered pluggable channel;
choosing one or more data communication processes implemented by one or more sinks to associate with the channel sink;
associating the one or more sinks with the channel sink; and
processing data associated with the method call on the remoted object through the one or more sinks associated with the channel sink.

35.   The method of claim 34 where determining whether one of the one or more registered channels desires to customize data communications associated with the method call on the remoted object comprises:

when a proxy is created, examining one or more registered pluggable channels to determine whether they desire to customize data communications associated with the proxy.

36.   The method of claim 34 where choosing one or more data communication processes to associate with the channel sink comprises:

identifying one or more client side data communication processes associated with a registered channel;

identifying one or more server side data communication processes associated with a registered channel; and

choosing one or more of the client side data communication processes and/or one or more of the server side data communication processes.

37.   The method of claim 34, where associating the one or more sinks with the channel sink comprises:

creating a sink chain, where the sink chain comprises an ordered set of the one or more sinks; and

binding the sink chain to a proxy that images the remoted object.

38.   The method of claim 35 where choosing one or more data communication processes to associate with the channel sink comprises:

identifying one or more client side data communication processes associated with a registered pluggable channel;

identifying one or more server side data communication processes associated with a registered pluggable channel; and

choosing one or more of the client side data communication processes and/or one or more of the server side data communication processes.

39. The method of claim 38, where associating the one or more sinks with the channel sink comprises:

creating a sink chain, where the sink chain comprises an ordered set of the one or more sinks; and

binding the message sink to a proxy that images the remoted object.

40. A computer readable medium containing computer executable instructions operable to perform a method to facilitate customizing a pluggable channel, the method comprising:

registering one or more pluggable channels;

intercepting a method call made on a remoted object;

determining whether one of the one or more registered channels desires to control data communications associated with the method call on the remoted object;

creating a channel sink associated with the registered pluggable channel;

choosing one or more data communication processes implemented by one or more sinks to associate with the channel sink;

associating the one or more sinks with the channel sink; and

processing data associated with the method call on the remoted object through the one or more sinks associated with the channel sink.

41. A system that facilitates making channels pluggable, the system comprising:

means for registering a channel;

means for intercepting a method call made on a server object;

means for determining whether a registered channel will control data communications associated with the method call on the server object;

means for creating a channel sink;

means for selecting data communication processes to associate with the channel sink;

means for associating the data communication processes with the channel sink; and

means for processing data associated with the method call on the server object through the data communication processes associated with the channel sink.

42.   A data packet adapted to be transmitted between two components, the data packet comprising:

a first field adapted to hold information concerning a method call on a server object;

a second field adapted to hold information concerning a channel sink associated with processing the information concerning the method call on the server object; and

a third field adapted to hold information concerning one or more data communication processes associated with the channel sink.